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| 1 | BRS | L1 | 100 | address and database and gift and (id or identifier or identifiers or identification or pseudonym or pseudonyms) and (choice or preference or preferences) and (charge or fee or cost) | USPAT | 2001/08/23 08:06 |
| 2 | BRS | L2 | 69 | 1 and (confirm or confirms or confirmation) | USPAT | 2001/08/23 08:24 |

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all titles*

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| 1 | BRS | L1 | 3 | address and database and gift and (id or identifier or identifiers or identification or pseudonym or pseudonyms) | EPO; JPO; DERWEN T | 2001/08/23 08:32 |

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| | U | Document ID | Issue Date | Pages | Title |
|----|-------------------------------------|---------------|------------|-------|--|
| 5 | <input checked="" type="checkbox"/> | US 6253193 B1 | 20010626 | 319 | Systems and methods for the secure transaction management and electronic rights protection |
| 6 | <input checked="" type="checkbox"/> | US 6249772 B1 | 20010619 | 33 | Systems and methods wherein a buyer purchases a product at a first price and acquires the product from a merchant that offers the product for sale at a second price |
| 24 | <input checked="" type="checkbox"/> | US 6058373 A | 20000502 | 41 | System and method for processing electronic order forms |
| 26 | <input checked="" type="checkbox"/> | US 6055513 A | 20000425 | 32 | Methods and apparatus for intelligent selection of goods and services in telephonic and electronic commerce |
| 27 | <input checked="" type="checkbox"/> | US 6035280 A | 20000307 | 28 | Electronic discount couponing method and apparatus for generating an electronic list of coupons |
| 31 | <input checked="" type="checkbox"/> | US 5982891 A | 19991109 | 315 | Systems and methods for secure transaction management and electronic rights protection |
| 34 | <input checked="" type="checkbox"/> | US 5949876 A | 19990907 | 318 | Systems and methods for secure transaction management and electronic rights protection |
| 35 | <input checked="" type="checkbox"/> | US 5917912 A | 19990629 | 319 | System and methods for secure transaction management and electronic rights protection |
| 36 | <input checked="" type="checkbox"/> | US 5915019 A | 19990622 | 317 | Systems and methods for secure transaction management and electronic rights protection |

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| 5 | 705/57 | 705/52 | | Ginter, Karl L. , et al. | <input type="checkbox"/> |
| 6 | 705/26 | | | Walker, Jay S. , et al. | <input type="checkbox"/> |
| 24 | 705/26 | 705/22 ; 705/27 ; 705/28 | | Blinn, Arnold , et al. | <input type="checkbox"/> |
| 26 | 705/26 | 705/10 ; 705/14 ; 705/27 | | Katz, Ronald A. , et al. | <input type="checkbox"/> |
| 27 | 705/14 | 186/52 ; 235/383 ; 705/1 ; 705/10 | | Christensen, Scott N. | <input type="checkbox"/> |
| 31 | 705/54 | 705/26 ; 713/167 | | Ginter, Karl L. , et al. | <input type="checkbox"/> |
| 34 | 705/80 | 705/1 ; 705/39 ; 705/54 | | Ginter, Karl L. , et al. | <input type="checkbox"/> |
| 35 | 713/187 | 705/40 ; 709/312 ; 713/164 | | Ginter, Karl L. , et al. | <input type="checkbox"/> |
| 36 | 705/54 | 705/26 ; 705/400 ; 713/200 | | Ginter, Karl L. , et al. | <input type="checkbox"/> |

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| 37 | <input checked="" type="checkbox"/> | US 5910987 A | 19990608 | 311 | Systems and methods for secure transaction management and electronic rights protection |
| 38 | <input checked="" type="checkbox"/> | US 5892900 A | 19990406 | 359 | Systems and methods for secure transaction management and electronic rights protection |
| 39 | <input type="checkbox"/> | US 5866888 A | 19990202 | 38 | Traveler security and luggage control system |
| 52 | <input checked="" type="checkbox"/> | US 5710886 A | 19980120 | 26 | Electric couponing method and apparatus |
| 56 | <input checked="" type="checkbox"/> | US 5663547 A | 19970902 | 78 | Method of fund-raising with a keyless contribution and gift commitment management device |
| 59 | <input type="checkbox"/> | US 5620182 A | 19970415 | 42 | Expected value payment method and system for reducing the expected per unit costs of paying and/or receiving a given amount of a commodity |
| 60 | <input type="checkbox"/> | US 5592378 A | 19970107 | 88 | Computerized order entry system and method |
| 66 | <input checked="" type="checkbox"/> | US 5269521 A | 19931214 | 40 | Expected value payment method and system for reducing the expected per unit costs of paying and/or receiving a given amount of a commodity |

| | Current OR | Current XRef | Retrieval Classif | Inventor | S |
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| 37 | 705/52 | 705/30 | | Ginter, Karl L. , et al. | <input type="checkbox"/> |
| 38 | 713/200 | 713/201 | | Ginter, Karl L. , et al. | <input type="checkbox"/> |
| 39 | 235/375 | 235/384 ; 235/462.13 | | Bravman, Richard , et al. | <input checked="" type="checkbox"/> |
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| 56 | 235/380 | 235/375 ; 235/376 ; 235/379 ; 235/385 ; 235/472.02 ; 705/1 ; 902/4 | | Ziarno, Witold A. | <input type="checkbox"/> |
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| 60 | 705/27 | 705/28 | | Cameron, Paul S. , et al. | <input checked="" type="checkbox"/> |
| 66 | 705/14 | 273/138.2 ; 273/460 ; 463/16 ; 463/22 ; 705/41 ; 902/23 | | Rossides, Michael T. | <input type="checkbox"/> |



US006253193B1

(12) **United States Patent**
Ginter et al.

(10) **Patent No.:** US 6,253,193 B1
(45) **Date of Patent:** Jun. 26, 2001

(54) **SYSTEMS AND METHODS FOR THE
SECURE TRANSACTION MANAGEMENT
AND ELECTRONIC RIGHTS PROTECTION**

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(75) **Inventors:** Karl L. Ginter, Beltsville; Victor H. Shear, Bethesda, both of MD (US); Francis J. Spahn, El Cerrito; David M. Van Wie, Sunnyvale, both of CA (US)

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(73) **Assignee:** InterTrust Technologies Corporation, Santa Clara, CA (US)

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(21) **Appl. No.:** 09/208,017

(22) **Filed:** Dec. 9, 1998

Related U.S. Application Data

(63) Continuation of application No. 08/964,333, filed on Nov. 4, 1997, now Pat. No. 5,982,891, which is a continuation of application No. 08/388,107, filed on Feb. 13, 1995, now abandoned.

(51) **Int. Cl.⁷** H04L 9/32

(52) **U.S. Cl.** 705/57; 705/52

(58) **Field of Search** 705/51, 52, 56,
705/57; 380/201-203; 386/94, 124

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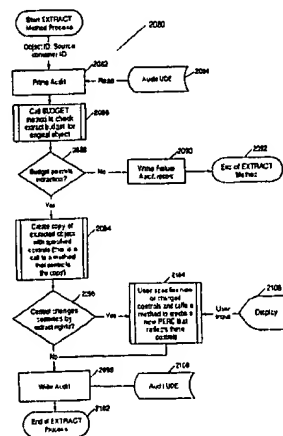
Primary Examiner—Gilberto Barrón, Jr.

(74) *Attorney, Agent, or Firm*—Finnegan, Henderson, Farabow, Garrett & Dunner L.L.P.

(57) **ABSTRACT**

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

72 Claims, 146 Drawing Sheets





US006249772B1

(12) **United States Patent**
Walker et al.

(10) Patent No.: **US 6,249,772 B1**
(45) Date of Patent: **Jun. 19, 2001**

(54) **SYSTEMS AND METHODS WHEREIN A BUYER PURCHASES A PRODUCT AT A FIRST PRICE AND ACQUIRES THE PRODUCT FROM A MERCHANT THAT OFFERS THE PRODUCT FOR SALE AT A SECOND PRICE**

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(75) Inventors: **Jay S. Walker**, Ridgefield; **James A. Jorasch**, Stamford; **Andrew S. Van Luchene**, Norwalk, all of CT (US)

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(73) Assignee: **Walker Digital, LLC**, Stamford, CT (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(21) Appl. No.: **08/889,503**

(22) Filed: **Jul. 8, 1997**

(51) Int. Cl.⁷ **G06F 17/60**

(52) U.S. Cl. **705/26**

(58) Field of Search 705/25-27, 1,
705/14, 10; 340/825.26, 825.29, 825.33-825.35;
707/1, 10, 9, 100; 379/88.17

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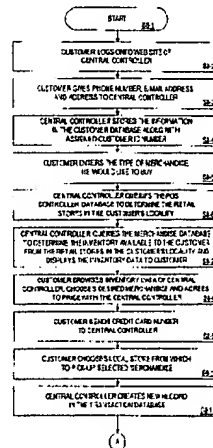
Primary Examiner—Frantzy Poinvil

(74) Attorney, Agent, or Firm—Dean Alderucci; Patrick J. Buckley

(57) **ABSTRACT**

Systems and methods are provided wherein a buyer purchases a product at a first price and acquires the product from a merchant that offers the product for sale at a second price, the second price being different from the first price. Transaction information associated with the buyer and the merchant is received. Information that allows the buyer to acquire the product from the merchant in exchange for providing payment of an amount based on the first price, such as by providing payment to a central controller, is transmitted. According to one embodiment, the central controller provides payment of an amount based on the second price to the merchant.

132 Claims, 15 Drawing Sheets





US006058373A

United States Patent [19][11] **Patent Number:** **6,058,373****Blinn et al.**[45] **Date of Patent:** **May 2, 2000**[54] **SYSTEM AND METHOD FOR PROCESSING ELECTRONIC ORDER FORMS**[75] Inventors: **Arnold Blinn**, Bellevue, Wash.;
Michael Ari Cohen, San Francisco, Calif.; **Michael Lorton**; **Gregory J. Stein**, both of Redmond, Wash.[73] Assignee: **Microsoft Corporation**, Redmond, Wash.[21] Appl. No.: **08/732,205**[22] Filed: **Oct. 16, 1996**[51] Int. Cl.⁷ **G08B 9/00**[52] U.S. Cl. **705/26; 705/22; 705/27; 705/28**[58] **Field of Search** **705/20, 22, 26, 705/27, 28, 29**[56] **References Cited****U.S. PATENT DOCUMENTS**

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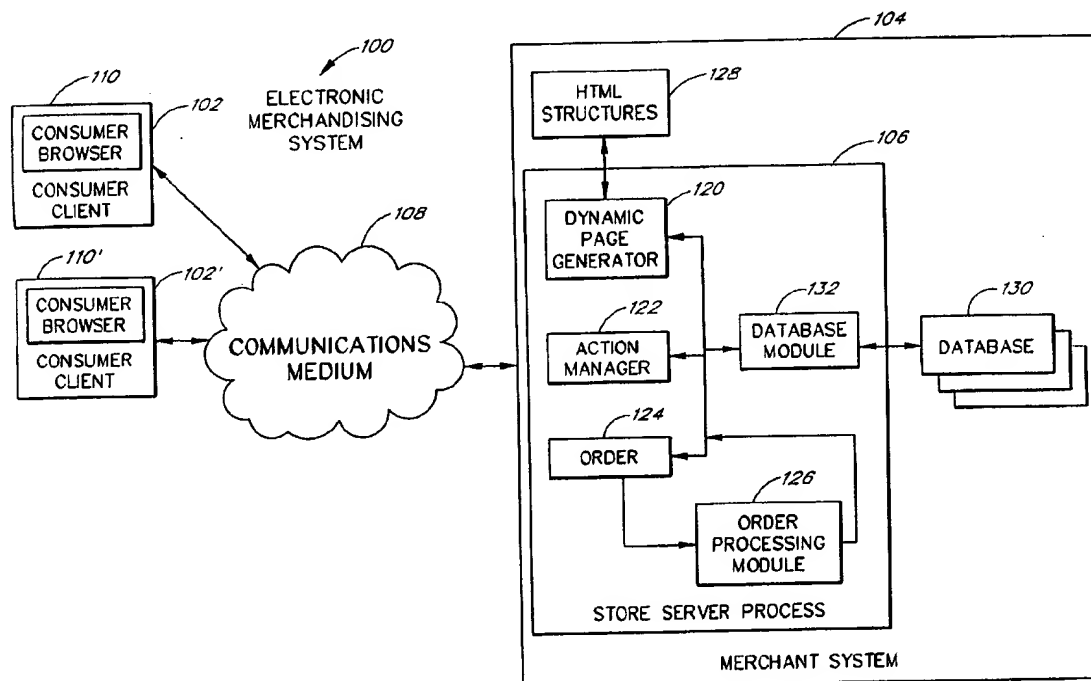
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Primary Examiner—Thomas R. Peeso
Attorney, Agent, or Firm—Lee & Hayes, PLLC

[57] **ABSTRACT**

The present invention provides a method and system for processing electronic sales transactions. In a preferred embodiment, an electronic merchandising system allows merchants to create electronic orders which are easily adaptable for different sales situations. The preferred electronic order comprises flexible blackboards which allow merchants to add sales information with what are called key-value pairs. In the preferred embodiment, the order is an object which contains at least one order blackboard and one or more item blackboards. In addition, the preferred embodiment contains an order processing module with multiple stages which process the order. The preferred stages include a product information stage, a merchant information stage, a shopper information stage, an order initialization stage, an order check stage, an item price adjust stage, an order price adjust stage, a shipping stage, a handling stage, a tax stage, an order total stage, an inventory stage, a payment stage and an accept stage.

58 Claims, 18 Drawing Sheets



US006055513A

United States Patent [19][11] **Patent Number:** **6,055,513****Katz et al.**[45] **Date of Patent:** **Apr. 25, 2000**

[54] **METHODS AND APPARATUS FOR INTELLIGENT SELECTION OF GOODS AND SERVICES IN TELEPHONIC AND ELECTRONIC COMMERCE**

[75] Inventors: **Ronald A. Katz**, Los Angeles, Calif.;
Gary L. West; **Thomas B. Barker**,
both of Omaha, Nebr.

[73] Assignee: **Telebuyer, LLC**, Los Angeles, Calif.

[21] Appl. No.: **09/038,399**

[22] Filed: **Mar. 11, 1998**

[51] Int. Cl.⁷ **G06F 17/60**

[52] U.S. Cl. **705/26; 705/27; 705/10;**
705/14

[58] Field of Search **705/10, 1, 26,**
705/27, 14

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Primary Examiner—Emanuel Todd Voeltz

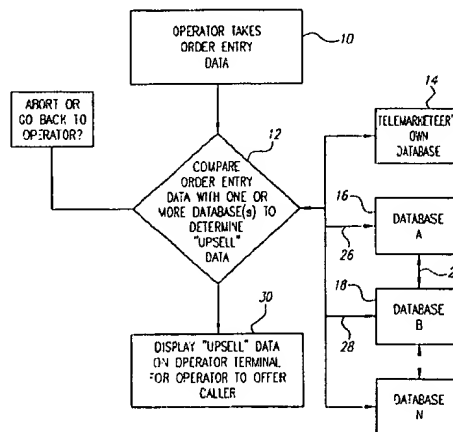
Assistant Examiner—George D. Morgan

Attorney, Agent, or Firm—Lyon & Lyon LLP

[57] **ABSTRACT**

Apparatus and methods are provided for effecting remote commerce, such as in telemarketing (either inbound or outbound) and in electronic commerce, which are particularly adapted for the intelligent selection and proffer of products, services or information to a user or customer. In one aspect of the invention, goods, service or information are provided to the user via electronic communication, such as through a telephone, videophone or other computer link, as determined by the steps of first, establishing communication via the electronic communications device between the user and the system to effect a primary transaction or primary interaction, second, obtaining data with respect to the primary transaction or primary interaction, including at least in part a determination of the identity of the user or prospective customer, third, obtaining at least a second data element relating to the user, fourth, utilizing the primary transaction or primary interaction data along with the at least second data element as factors in determining at least one good, service or item of information for prospective upsell to the user or prospective customer, and offering the item to the prospective customer. In the preferred embodiment, the selection of the proffer of goods, services or information comprises an upsell with respect to the primary transaction or primary interaction data. The offer of the upsell is preferably generated and offered in real time, that is, during the course of the communication initiated with the primary transaction or primary interaction.

267 Claims, 9 Drawing Sheets





US006035280A

United States Patent [19]

Christensen

[11] Patent Number: 6,035,280
[45] Date of Patent: *Mar. 7, 2000

[54] **ELECTRONIC DISCOUNT COUPONING METHOD AND APPARATUS FOR GENERATING AN ELECTRONIC LIST OF COUPONS**

[76] Inventor: **Scott N. Christensen**, 15606 Holmes Cir., Omaha, Nebr. 68135

[*] Notice: This patent is subject to a terminal disclaimer.

[21] Appl. No.: 08/630,330

[22] Filed: Apr. 10, 1996

Related U.S. Application Data

[63] Continuation-in-part of application No. 08/491,367, Jun. 16, 1995, Pat. No. 5,710,886.

[51] Int. Cl.⁷ G06F 15/00; G06F 15/21; G06F 15/22; G06F 15/24

[52] U.S. Cl. 705/14; 705/10; 705/1; 364/401; 364/402; 364/479; 186/52; 235/383

[58] Field of Search 705/14; 186/52; 235/383; 364/401, 402, 479

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Primary Examiner—Allen R. MacDonald

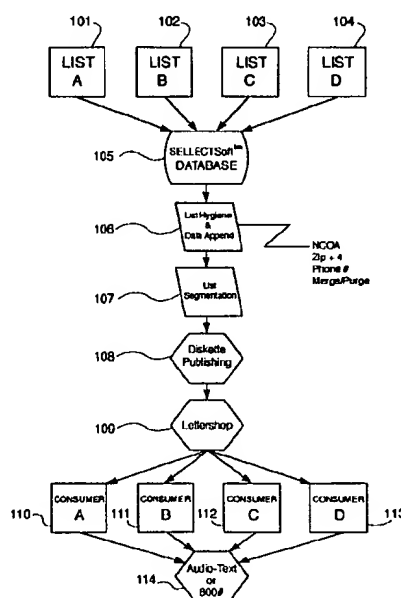
Assistant Examiner—Pedro R. Kanof

Attorney, Agent, or Firm—Robert Platt Bell & Associates, P.C.

[57] ABSTRACT

A method and apparatus for distributing, generating, and redeeming discount Virtual Coupons™, rebate or gift certificates or the like which may be used on conjunction with a frequency card program or the like. Virtual Coupons™ may be distributed electronically, for example, in the form of a diskette or CD-ROM software. Software on the diskette or CD-ROM may prompt a consumer to call a 1-800 number for a validation number or code. During the phone call, telemarketing personnel may request consumer demographic and or identification information which may be entered into a centralized database. Once the software is validated, a consumer may print out a list selected Virtual Coupons™ displayed on a Graphical User Interface (GUI). When a product is purchased, the UPC code of the product may be compared electronically with a list of Virtual Coupons™ authorized for a particular consumer. An appropriate coupon discount may then be applied and the Virtual Coupon™ may be considered "redeemed". Once redeemed, consumer ID information and Virtual Coupon™ information may be retrieved electronically and used to update a central database. Accurate data may then be produced illustrating which consumers or groups of consumers are redeeming which Virtual Coupons™. Such data may be used for marketing purposes or to generated further diskettes for distribution targeting specific consumers or groups of consumers with specific classes of Virtual Coupon™ offerings. The use of Virtual Coupons™ eliminates or reduces fraud, and allows a frequency card discount to be applied only a limited number of times.

20 Claims, 14 Drawing Sheets





US005982891A

United States Patent [19]

Ginter et al.

[11] Patent Number: **5,982,891**
 [45] Date of Patent: **Nov. 9, 1999**

[54] SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION

[75] Inventors: **Karl L. Ginter**, Beltsville; **Victor H. Shear**, Bethesda, both of Md.; **Francis J. Spahn**, El Cerrito; **David M. Van Wle**, Sunnyvale, both of Calif.

[73] Assignee: **InterTrust Technologies Corp.**, Sunnyvale, Calif.

[21] Appl. No.: **08/964,333**

[22] Filed: **Nov. 4, 1997**

Related U.S. Application Data

[63] Continuation of application No. 08/388,107, Feb. 13, 1995, abandoned.

[51] Int. Cl.⁶ **H04L 9/30**

[52] U.S. Cl. **380/4; 380/24; 380/25; 705/26**

[58] Field of Search **380/4, 25; 396/683; 705/26; 300/24**

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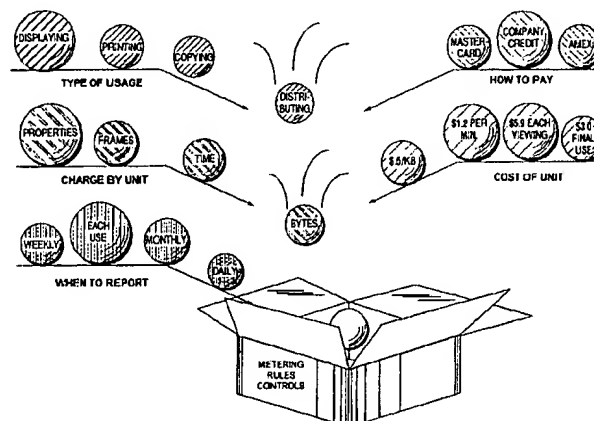
Primary Examiner—Gilberto Barron, Jr.

Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57] ABSTRACT

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

102 Claims, 146 Drawing Sheets





US005949876A

United States Patent [19]

Ginter et al.

[11] Patent Number: **5,949,876**
 [45] Date of Patent: ***Sep. 7, 1999**

[54] SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION

[75] Inventors: **Karl L. Ginter**, Beltsville; **Victor H. Shear**, Bethesda, both of Md.; **Francis J. Spahn**, El Cerrito; **David M. Van Wie**, Sunnyvale, both of Calif.

[73] Assignee: **InterTrust Technologies Corporation**, Sunnyvale, Calif.

[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

[21] Appl. No.: **08/778,256**

[22] Filed: **Jan. 8, 1997**

Related U.S. Application Data

[62] Division of application No. 08/388,107, Feb. 13, 1995, abandoned.

[51] Int. Cl.⁶ **H04L 9/32**

[52] U.S. Cl. **380/4; 380/24; 705/39**

[58] Field of Search **395/237, 241; 380/4, 16, 49, 24; 705/39**

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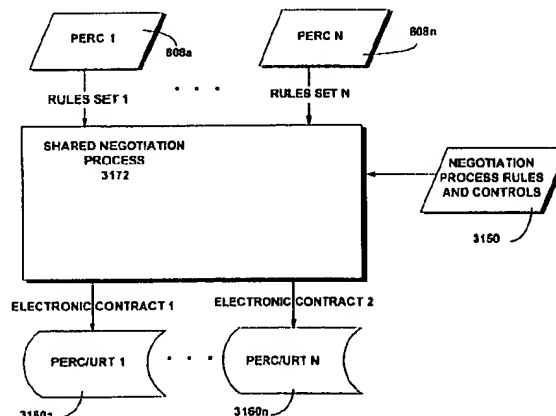
Primary Examiner—Gilberto Barrón, Jr.

Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57] ABSTRACT

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

375 Claims, 146 Drawing Sheets





US005917912A

United States Patent [19]
Ginter et al.

[11] **Patent Number:** **5,917,912**
 [45] **Date of Patent:** **Jun. 29, 1999**

[54] **SYSTEM AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION**

[75] **Inventors:** **Karl L. Ginter**, Beltsville; **Victor H. Shear**, Bethesda, both of Md.; **Francis J. Spahn**, El Cerrito; **David M. Van Wie**, Sunnyvale, both of Calif.

[73] **Assignee:** **InterTrust Technologies Corporation**, Sunnyvale, Calif.

[21] **Appl. No.:** **08/780,545**

[22] **Filed:** **Jan. 8, 1997**

Related U.S. Application Data

[62] Division of application No. 08/388,107, Feb. 13, 1995, abandoned.

[51] **Int. Cl.⁶** **G06F 17/60**

[52] **U.S. Cl.** **380/24; 380/4; 395/683; 705/40**

[58] **Field of Search** **380/4, 25; 395/186, 395/683, 684**

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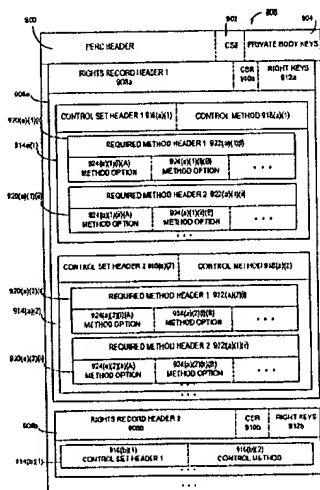
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Primary Examiner—Gilberto Barrón, Jr.
Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57] ABSTRACT

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

58 Claims, 146 Drawing Sheets





US005915019A

United States Patent [19]

Ginter et al.

[11] **Patent Number:** **5,915,019**
 [45] **Date of Patent:** **Jun. 22, 1999**

[54] SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION

[75] Inventors: **Karl L. Ginter**, Beltsville; **Victor H. Shear**, Bethesda, both of Md.; **Francis J. Spahn**, El Cerrito; **David M. Van Wle**, Sunnyvale, both of Calif.

[73] Assignee: **InterTrust Technologies Corp.**, Sunnyvale, Calif.

[21] Appl. No.: **08/780,393**

[22] Filed: **Jan. 8, 1997**

Related U.S. Application Data

[62] Division of application No. 08/388,107, Feb. 13, 1995, abandoned.

[51] Int. Cl.⁶ **H04L 9/00**

[52] U.S. Cl. **380/4; 380/21; 380/49; 395/680; 705/26; 705/400**

[58] Field of Search **380/3, 4, 5, 21, 380/49; 395/680, 683; 705/26, 400**

[56] References Cited

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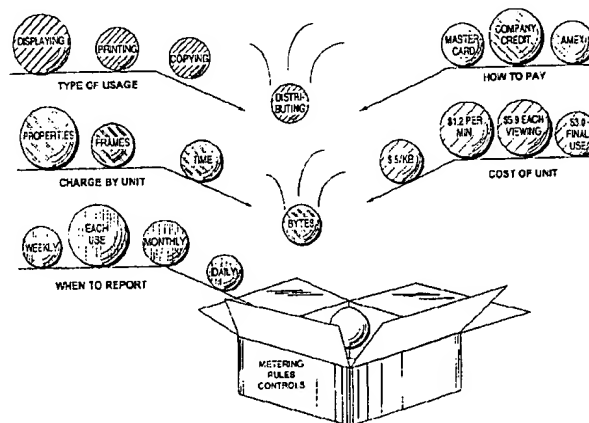
Primary Examiner—Gilberto Barrón, Jr.

Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57] ABSTRACT

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

101 Claims, 146 Drawing Sheets





US005910987A

United States Patent [19]

Ginter et al.

[11] Patent Number: **5,910,987**
 [45] Date of Patent: **Jun. 8, 1999**

[54] **SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION**

0128672 12/1984 European Pat. Off. .
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 0180460 5/1986 European Pat. Off. .

(List continued on next page.)

[75] Inventors: **Karl L. Ginter**, Beltsville; **Victor H. Shear**, Bethesda, both of Md.; **Francis J. Spahn**, El Cerrito; **David M. Van Wie**, Sunnyvale, both of Calif.

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[21] Appl. No.: **08/760,440**

[22] Filed: **Dec. 4, 1996**

Related U.S. Application Data

[63] Continuation of application No. 08/388,107, Feb. 13, 1995, abandoned.

[51] Int. Cl.⁶ **H04L 9/32; G06F 17/60**

[52] U.S. Cl. **380/24; 380/4**

[58] Field of Search **380/4, 25, 24; 395/683, 684; 705/26**

(List continued on next page.)

Primary Examiner—Gilberto Barron, Jr.
Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57]

ABSTRACT

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

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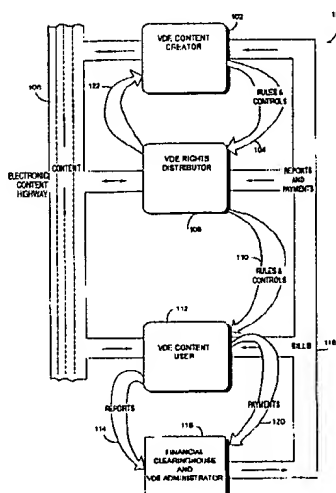
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2 Claims, 146 Drawing Sheets





US005892900A

United States Patent [19]

Ginter et al.

[11] Patent Number: 5,892,900
[45] Date of Patent: Apr. 6, 1999

[54] SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION

[75] Inventors: Karl L. Ginter, Beltsville; Victor H. Shear, Bethesda, both of Md.; W. Olin Sibert, Lexington, Mass.; Francis J. Spahn, El Cerrito; David M. Van Wie, Sunnyvale, both of Calif.

[73] Assignee: InterTrust Technologies Corp., Sunnyvale, Calif.

[21] Appl. No.: 706,206

[22] Filed: Aug. 30, 1996

[51] Int. Cl.⁶ G06F 11/00

[52] U.S. Cl. 395/186; 395/184.01

[58] Field of Search 395/186, 187.01, 395/188.01, 218, 200.59; 380/4, 25, 30, 825.31, 825.34

[56] References Cited

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Primary Examiner—Robert W. Beausoliel, Jr.

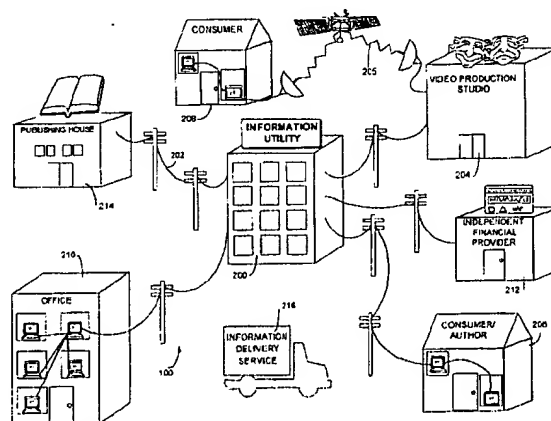
Assistant Examiner—Pierre F. Elisca

Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57] ABSTRACT

The present invention provides systems and methods for electronic commerce including secure transaction management and electronic rights protection. Electronic appliances such as computers employed in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Secure subsystems used with such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Secure distributed and other operating system environments and architectures, employing, for example, secure semiconductor processing arrangements that may establish secure, protected environments at each node. These techniques may be used to support an end-to-end electronic information distribution capability that may be used, for example, utilizing the "electronic highway."

220 Claims, 163 Drawing Sheets





US005866888A

United States Patent [19][11] **Patent Number:** **5,866,888****Bravman et al.**[45] **Date of Patent:** **Feb. 2, 1999****[54] TRAVELER SECURITY AND LUGGAGE CONTROL SYSTEM**

[75] Inventors: **Richard Bravman**, Smithtown; **Ynjun P. Wang**, Stony Brook, both of N.Y.; **D. C. Toedt, III**; **Stefan G. Vingsbo**, both of Houston, Tex.

[73] Assignee: **Symbol Technologies, Inc.**, Holtsville, N.Y.

[21] Appl. No.: **411,289**

[22] Filed: **Mar. 27, 1995**

Related U.S. Application Data

[60] Division of Ser. No. 923,771, Aug. 3, 1992, Pat. No. 5,401,944, which is a continuation-in-part of Ser. No. 642,775, Jan. 18, 1991, Pat. No. 5,159,635, and a continuation-in-part of Ser. No. 616,026, Nov. 20, 1990, abandoned.

[51] Int. Cl.⁶ **G06F 17/00**

[52] U.S. Cl. **235/375; 235/462; 235/384**

[58] Field of Search **235/379, 382, 235/384, 375, 462; 902/3, 4, 5**

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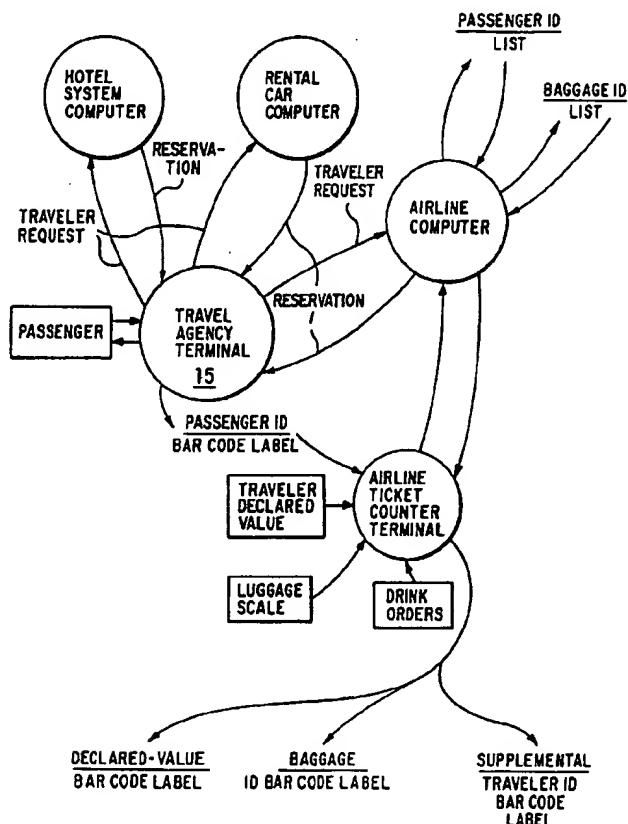
Primary Examiner—Anita Pellman Gross

Assistant Examiner—Michael G. Lee

Attorney, Agent, or Firm—Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.

[57] ABSTRACT

A two-dimensional bar code is used to identify a traveler's luggage, permitting the luggage to be tracked and, if desired, to be delivered to the traveler's ultimate destination (e.g., a hotel). If the traveler is traveling on an airline, a corresponding two-dimensional bar code is applied to the traveler's boarding pass. A two-dimensional bar code reader is used to read the boarding-pass bar code of each enplaning passenger; comparison of these bar codes with luggage bar-code data permits an alarm to be raised if each item of checked luggage is not matched by an enplaned passenger. The boarding-pass bar code may take the form of an integrated passenger identification code for use by, e.g., rental car companies, hotels, and the like.

20 Claims, 23 Drawing Sheets



US005710886A

United States Patent [19]

Christensen et al.

[11] Patent Number: 5,710,886
[45] Date of Patent: Jan. 20, 1998

[54] ELECTRIC COUPONING METHOD AND APPARATUS

[75] Inventors: Scott N. Christensen, Omaha, Nebr.;
David D. Ingwersen, Scottsdale, Ariz.

[73] Assignee: SelectSoft, L.C., Phoenix, Ariz.

[21] Appl. No.: 491,367

[22] Filed: Jun. 16, 1995

[51] Int. Cl.⁶ G06F 151/00

[52] U.S. Cl. 395/214; 395/201

[58] Field of Search 395/201, 214;
366/479.07; 235/381, 385; 186/52, 55-56

[56] References Cited

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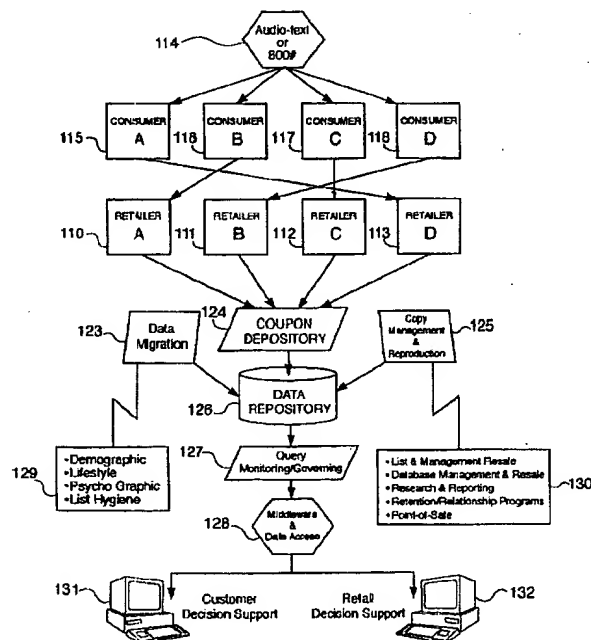
Fawcett, Adrienne Ward "Trading Scissors for Modems", *Advertising Age*, Jun. 6, 1995.

Primary Examiner—Gail O. Hayes
Assistant Examiner—Frantzy Poinvil
Attorney, Agent, or Firm—Robert Platt Bell & Associates, P.C.

[57] ABSTRACT

A method and apparatus for distributing, generating, and redeeming discount coupons, rebate or gift certificates or the like tracks each coupon using a consumer ID number printed on the coupon. Coupons may be distributed electronically, for example, in the form of a diskette or CD-ROM software. Software on the diskette or CD-ROM may prompt a consumer to call a 1-800 number for a validation number or code. During the phone call, telemarketing personnel may request consumer demographic and or identification information which may be entered into a centralized database. Once the software is validated, a consumer may print out selected coupons displayed on a Graphical User Interface (GUI). Each coupon may be printed only a limited number of times. Each coupon may be imprinted with a consumer ID number, preferably in the form of a bar code. Once redeemed, consumer ID information and coupon information may be retrieved from coupons forwarded to a coupon clearing house. Accurate data may then be produced illustrating which consumers or groups of consumers are redeeming which coupons. Such data may be used for marketing purposes or to generated further diskettes for distribution targeting specific consumers or groups of consumers with specific classes of coupon offerings. The use of a consumer ID number on the coupon may reduce or prevent the fraudulent copying and redemption of coupons, as multiple redemptions of a single coupon by a consumer may be readily detected from data gathered at the brokerage clearing house.

19 Claims, 14 Drawing Sheets





US005663547A

United States Patent [19]

Ziarno

[11] Patent Number: 5,663,547
[45] Date of Patent: Sep. 2, 1997

[54] METHOD OF FUND-RAISING WITH A KEYLESS CONTRIBUTION AND GIFT COMMITMENT MANAGEMENT DEVICE

[76] Inventor: Witold A. Ziarno, 4519 S. St. Louis Ave., Chicago, Ill. 60632

[21] Appl. No.: 505,610

[22] Filed: Jul. 24, 1995

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 318,914, filed as PCT/US94/09915, Sep. 6, 1994.

[51] Int. Cl.⁶ G06K 5/00

[52] U.S. Cl. 235/380; 235/379; 235/385; 235/472; 902/4; 705/1

[58] Field of Search 235/380, 379, 235/385, 472; 902/4, 22; 364/401, 402, 406, 408

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Primary Examiner—Donald T. Hajec

Assistant Examiner—Michael G. Lee

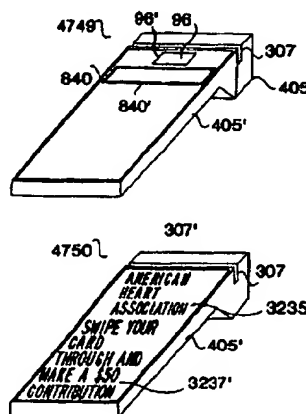
Attorney, Agent, or Firm—Witold A. Ziarno

[57] ABSTRACT

A method of and device for streamlining, simplifying and inducing the giving of contribution or gift commitments by contributors or prospective gift givers [, and receiving thereof upon receipt that] involves dispersing through a crowd of prospective contributors or gift givers a plurality of keyless, electronic contributions or gifts management

devices for immediate entry of consecutive data comprising the identities of the contributors or gift givers making the monetary contribution commitments or monetary gift commitments, and device therefor. Optionally, the method and mode of operation of the device involves a plurality of gift recipients of the monetary contribution or monetary gift commitments, and further includes the step of supplanting a gift recipient or fund-raising organization with another gift recipient or fund-raising organization to which contribution or gift commitments are made. The method and mode of operation of the device has the advantage that the entry of gifts or contribution commitments to a plurality of the gift recipients or fund-raising organizations is simplified. [Optionally, the method and the mode of operation of device includes the step of correlating a numerical amount to the successive contributors' or gift givers' data to obtain contribution or gift data sets, and in which the step of dispersing is selected from the group consisting of spreading, distributing, migrating, advancing, disseminating, and diffusing the devices. The method and mode of operation of the device further includes the steps of communicating the data for a plurality of contribution or gift commitments in a substantially continuous stream to a remote device for immediate recordation thereof on the remote device. Optionally, the method or mode of operation of the devices involves a plurality of consecutive contribution or gift commitments entered on the devices unimpeded by verification of authorization whereby the throughput of contribution or gift commitments entered on the devices is enhanced. In yet another variant of the method or mode of operation of the device involves a first group of contributors or gift givers making gift or contribution commitments on the devices that are correlated to a numerical contribution or gift amount and in other contributors or gift givers making gift or contribution commitments correlated to mutable contribution numerical amounts. The numerical amount is selected from the group of a pre-programmed numerical amount, a prearranged numerical amount, a fixed numerical amount, a variable numerical amount, a numerical amount of an order inducing the making of a monetary contribution, and a post-programmed numerical amount. The entry of the consecutive contributions or gifts further comprises immediate recordation thereof on the devices, and optionally further including the step of communicating the contribution or gift data to a card account processor for processing thereof.

22 Claims, 26 Drawing Sheets





US005620182A

United States Patent [19][11] **Patent Number:** 5,620,182**Rossides**[45] **Date of Patent:** Apr. 15, 1997

[54] **EXPECTED VALUE PAYMENT METHOD
AND SYSTEM FOR REDUCING THE
EXPECTED PER UNIT COSTS OF PAYING
AND/OR RECEIVING A GIVEN AMMOUNT
OF A COMMODITY**

4,815,741 3/1989 Small 273/138 A
4,859,590 8/1989 Jolliff 273/138 A
4,948,134 8/1990 Suttle et al. 273/274
5,085,435 2/1992 Rossides 273/138 A
5,269,521 12/1993 Rossides 273/138 A

[76] **Inventor:** Michael T. Rossides, 3666 Upton St.,
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2123702 2/1984 United Kingdom 273/138 A

[21] **Appl. No.:** 165,676

Primary Examiner—Benjamin H. Layno

[22] **Filed:** Dec. 13, 1993

[57] **ABSTRACT****Related U.S. Application Data**

[63] Continuation-in-part of Ser. No. 804,479, Dec. 13, 1991,
Pat. No. 5,269,521, which is a continuation-in-part of Ser.
No. 609,063, Nov. 7, 1990, Pat. No. 5,085,435, which is a
continuation-in-part of Ser. No. 571,126, Aug. 22, 1990,
abandoned.

Disclosed is an Expected Value Payment Method for the purpose of reducing the expected per unit costs incurred in paying and/or receiving a given amount of a commodity. An Expected Value Payment Method uses a random number supplier to decide bets that can reduce expected per unit costs in two ways. First, expected per unit costs can be reduced for the payer and/or receiver of a commodity by giving the receiver a chance to win a greater amount of the commodity than a given amount, the greater amount having a lower per unit cost than the given amount which was originally to be paid and received. Second, a probabilistic sorting method and system is disclosed allowing businesses to offer customers who bet to win a given amount of a commodity a better expected price for that amount than the price offered to customers paying conventionally. Also disclosed are Expected Value Payment Execution Methods and Systems that make an Expected Value Payment Method practical in the marketplace and methods and systems for preventing cheating in expected value payment bets.

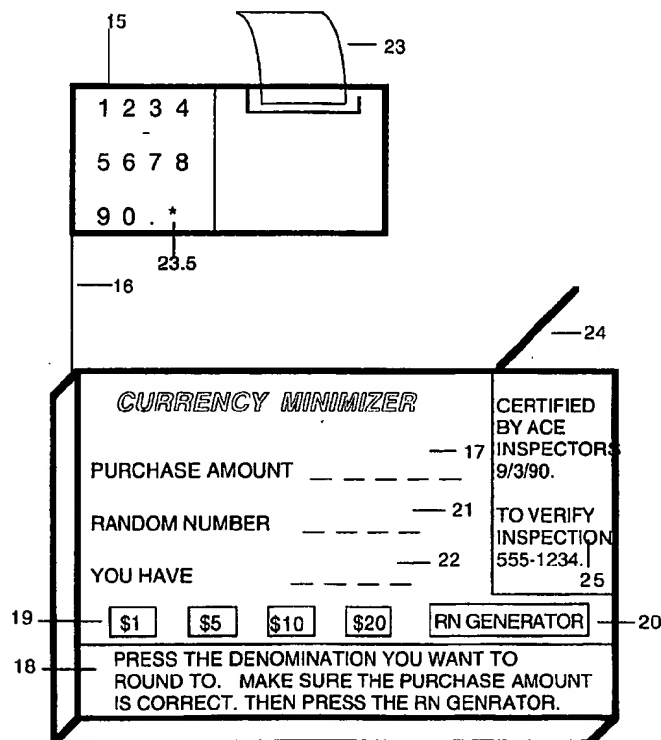
[51] **Int. Cl.⁶** A63F 9/00; G06F 17/60

[52] **U.S. Cl.** 273/138.2; 463/25; 364/412;
395/214; 395/216

[58] **Field of Search** 273/138 A, 138 R,
273/460, 138.2; 364/412, 405; 194/211,
219, 230, 292; 463/25

[56] **References Cited****U.S. PATENT DOCUMENTS**

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2 Claims, 15 Drawing Sheets



US005592378A

United States Patent [19]**Cameron et al.**[11] **Patent Number:** **5,592,378**[45] **Date of Patent:** **Jan. 7, 1997**[54] **COMPUTERIZED ORDER ENTRY SYSTEM
AND METHOD**

[75] **Inventors:** Paul S. Cameron, Minneapolis; John C. Nash, Shoreview; Robert C. Bloomer, Little Canada; Robert E. Wollan, Minneapolis; Kelly M. Kreutter, Minnetonka; Melinda A. Ahler Olmstead, Shoreview; Dale H. Renner, Edina; Ryan D. Bourne, Eden Prairie; Keith M. Carnish, Minneapolis; Dean R. Jones, St. Louis Park, all of Minn.

[73] **Assignee:** Andersen Consulting LLP, Chicago, Ill.

[21] **Appl. No.:** 293,470

[22] **Filed:** Aug. 19, 1994

[51] **Int. Cl.⁶** G06F 153/00

[52] **U.S. Cl.** 395/227; 395/228

[58] **Field of Search** 364/401, 403,
364/407, 408

[56] **References Cited****U.S. PATENT DOCUMENTS**

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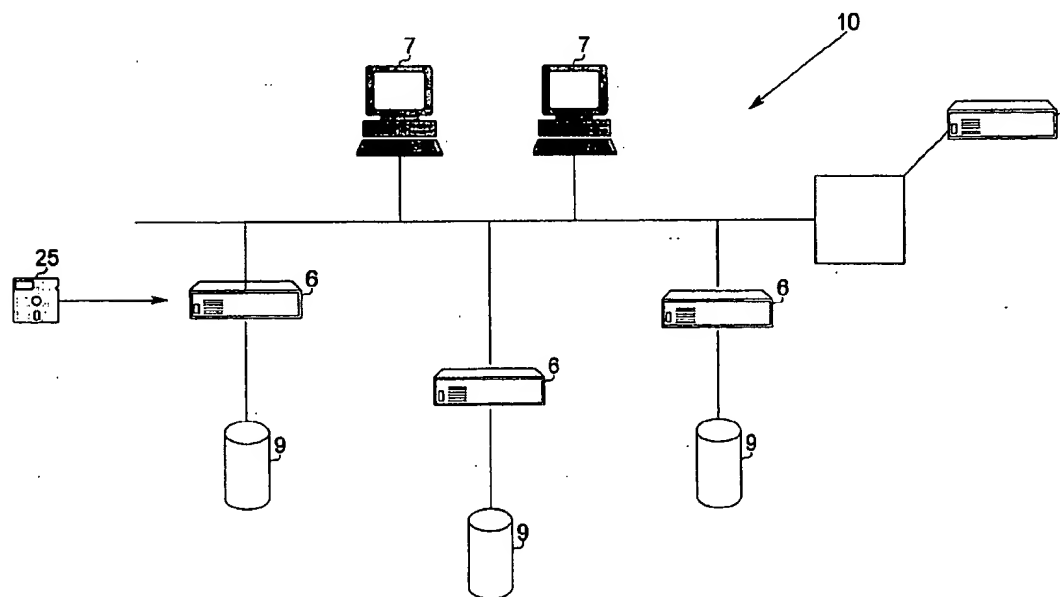
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Primary Examiner—Donald E. McElheny, Jr.

Attorney, Agent, or Firm—Merchant, Gould, Smith, Edell, Welter & Schmidt, P.A.

[57] **ABSTRACT**

A computerized order entry system for the placement of an order by a user via a terminal having a display is disclosed. The system includes a data capture mechanism for capturing order information and a storage device for storing the order information captured through the data capture mechanism. The system also provides a user interface for providing the user with access to a plurality of buttons representing a plurality of corresponding order entry functions. Each button is associated with an order entry function window having at least one data capture field into which order information related to the corresponding function may be captured. The user interface includes a mechanism for automatically routing the user to a particular order entry function window upon selection of the associated button. With such a configuration, placement of the order is substantially user-driven.

48 Claims, 41 Drawing Sheets



US005269521A

United States Patent [19][11] **Patent Number:** **5,269,521****Rossides**[45] **Date of Patent:** **Dec. 14, 1993**

- [54] **EXPECTED VALUE PAYMENT METHOD AND SYSTEM FOR REDUCING THE EXPECTED PER UNIT COSTS OF PAYING AND/OR RECEIVING A GIVEN AMOUNT OF A COMMODITY**

5,085,435 2/1992 Rossides 273/138 A

FOREIGN PATENT DOCUMENTS

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Primary Examiner—Benjamin H. Layno

- [76] **Inventor:** Michael T. Rossides, 3666 Upton St., NW., Washington, D.C. 20008

- [21] **Appl. No.:** 804,479

- [22] **Filed:** Dec. 13, 1991

Related U.S. Application Data

- [63] Continuation-in-part of Ser. No. 609,063, Nov. 7, 1990, Pat. No. 5,085,435, which is a continuation-in-part of Ser. No. 571,126, Aug. 22, 1990, abandoned.

- [51] **Int. Cl.⁵** A63F 9/00; G06F 15/28

- [52] **U.S. Cl.** 273/138 R; 273/460; 364/412; 364/405; 902/23

- [58] **Field of Search** 273/128 R, 138 A; 364/412, 405; 194/211, 219, 230, 292

- [56] **References Cited**

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 4,859,590 8/1989 Jolliff 273/138 A
 4,948,134 8/1990 Suttle et al. 273/274

[57] **ABSTRACT**

Disclosed is an Expected Value Payment Method for the purpose of reducing the expected per unit costs incurred in paying and/or receiving a given amount of a commodity. An Expected Value Payment Method uses a random number supplier to decide bets that can reduce expected per unit costs in two ways. First, expected per unit costs can be reduced for the payer and/or receiver of a commodity by giving the receiver a chance to win a greater amount of the commodity than a given amount, the greater amount having a lower per unit cost than the given amount which was originally to be paid and received. Second, in special situations, certain businesses can offer customers who bet to win a given amount of a commodity a better expected price for that amount than the price offered to customers paying conventionally for that same amount. Also disclosed are Expected Value Payment Execution Methods and Systems that make an Expected Value Payment Method practical in the marketplace and methods and systems for preventing cheating in expected value payment bets.

2 Claims, 14 Drawing Sheets